

Statistics
Ch. 4 Test REVIEW

Name: _____

Date: _____

- 1) Match each description with its term. You may end up using a term from the pool more than once or not at all. (2points each)

Word Pool		
Mean	Standard Deviation	IQR (Interquartile Range)
Median	Range	Third quartile
Mode		First quartile

- _____ a good choice for describing the center of skewed data
- _____ compare the extremes of the data
- _____ summarizes how far each data value is from the average of the data
- _____ splits a histogram into halves/is the middle of the histogram
- _____ describes the center of symmetric data better than it describes the center of skewed data
- _____ summarizes the spread of the central 50% of the data
- _____ the center of the lower half of the data
- _____ where the peaks of a histogram are

- 2) Choose one term from the Word Pool. Tell why that term is important to use when analyzing data using statistics. (3 points)

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- 3) Here are the ages of the last 15 Presidents of the United States at their first inauguration, listed from youngest to oldest. Find the five-number summary of this data set and describe what each number tells you about the data. (1point for each value; 2 points for each description)

43, 46, 47, 51, 51, 52, 54, 54, 55, 56, 60, 61, 62, 64, 69

5 Number Summary	Value	Describe in Context
Minimum		
First Quartile		
Median		
Third Quartile		
Maximum		

- 4) Find the mean and standard deviation of these ages. (2 points total)

- 5) Which would best describe the center and spread of this data set: mean and standard deviation OR median and IQR. Justify your decision using facts. It might help to draw a dotplot or histogram. (5 points for an *excellent* answer and justification)

Use the information below to answer questions 5 – 9.

A survey conducted in a college intro Statistics class asked students about the number of credit hours they were taking that quarter. The number of credit hours for a random sample of 16 students is given in the table below.

10	10	12	14	15	15	15	15
17	17	19	20	20	20	20	22

- 6) Sketch a histogram of these data. (4 points)
- 7) Find the mean and standard deviation for the number of credit hours. (2 points total)
- 8) Find the median and IQR for the number of credit hours. (2 points total)
- 9) Is it more appropriate to use the mean and standard deviation or the median and IQR to summarize these data? Explain. (5 points for an *excellent* answer and justification)

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10) Suppose that in the data set above the student listed as taking 22 credit hours was actually taking 28 credit hours instead (so we would replace the 22 in the data set with 28). State whether changing the number of credit hours for that student would make each of the following summary statistics increase, decrease, or stay about the same.

a. Mean

b. Median

c. Range

d. IQR

e. Standard deviation
